

In the Claims

This listing of claims will replace all prior versions, and listings, of claims.

Listing of Claims

1. (Currently amended) An image projection apparatus, comprising:

a projector, a frame, a light source and an at least partially transparent screen;

the frame being arranged to retain the screen under tension, such that the tension of the screen can be varied at a plurality of positions along at least one edge of said screen ~~at a plurality of positions along at least one edge of said screen, such that the screen is inclined at an angle with respect to a plane of emission of light from the projector;~~

the light source arranged to illuminate at least part of the apparatus, ~~the light source being optionally located to the rear of the screen, along a top edge of the frame and/or along either side of a stage;~~

the screen inclined at an angle with respect to a plane of emission of light from the projector and the screen having a front surface arranged such that light emitted from the projector is reflected therefrom; and

the projector being arranged to project an image such that light forming the image impinges upon the screen such that a virtual image is created from light reflected from the screen, the virtual image appearing to be located behind the screen, wherein the screen is foil and the frame comprises first and second retention members arranged to sandwich an edge region of the screen therebetween and at least one of the first and second retention members comprises an abrasive coating arranged to contact the screen.

2. (Currently amended) The apparatus according to claim 1 wherein the abrasive coating is sandpaper the screen is a foil and/or the screen is inclined at approximately 45 degree. to the plane of emission of light from the projector.

3-4. (Canceled)

5. (Currently amended) The apparatus according to claim 1 wherein the first and second retention members comprise respective openings therethrough arranged to collocate with respective openings in the screen wherein the openings are arranged to receive a fixing means so as to clamp the screen between the first and second retention members the screen comprises upper and lower edges and the screen is attached to the frame at the screen's upper and/or lower edges.

6. (Currently amended) The apparatus according to claim 1 wherein the frame is arranged to retain the screen under tension such that the tension of the screen can be varied at a plurality of positions along at least one edge of the screen such that the screen is substantially wrinkle free the frame comprises first and second retention members each arranged to sandwich an edge region of the screen therebetween.

7. (Currently amended) The apparatus according to claim 6 wherein at least one of the first and second retention members comprises an abrasive coating arranged to contact the screen. An image projection apparatus, comprising:

a projector, a frame, a light source and an at least partially transparent screen;
the frame being arranged to retain the screen under tension, such that the tension of the screen can be varied at a plurality of positions along at least one edge of said screen such that the screen is substantially wrinkle free;

the light source arranged to illuminate at least part of the apparatus;
the screen inclined at an angle with respect to a plane of emission of light from the projector
and the screen having a front surface arranged such that light emitted from the projector is
reflected therefrom; and
the projector being arranged to project an image such that light forming the image impinges
upon the screen such that a virtual image is created from light reflected from the screen, the virtual
image appearing to be located behind the screen, wherein the screen is foil and the frame
comprises first and second retention members each arranged to sandwich an edge region of the
screen therebetween, the first and second retention members comprising respective openings
therethrough arranged to collocate with respective openings in the screen, wherein the openings
are arranged to receive a fixing means so as to clamp the screen between the first and second
retention members.

8-9. (Canceled)

10. (Currently amended) ~~The apparatus according to claim 8 wherein the tensioning straps are attached to a truss arrangement or a fixed mounting point located in a permanent structure such as a wall, floor or ceiling and are adjustable such that the tension of the screen within the truss arrangement can be varied about the periphery of the screen. The apparatus of claim 7,~~ wherein the screen is attached to the frame at the screen's upper and/or lower edges.

11. (Canceled)

12. (Currently amended) ~~The apparatus according to claim 1 which comprises a pigmented reflective member in an optical pathway between a lens of the projector and the screen. The~~

apparatus of claim 7, wherein at least one of the first and second retention members is attached to tensioning straps.

13. (Currently amended) ~~The apparatus according to claim 12 which comprises an adjustably angled, mirrored surface in an optical pathway between the lens of the projector and the pigmented reflective member; The apparatus of claim 12, wherein the tensioning straps are attached to a truss arrangement or a fixed mounting point located in a permanent structure such as a wall, floor or ceiling and are adjustable such that the tension of the screen within the truss arrangement can be varied about the periphery of the screen.~~

14-15. (Canceled)

16. (Currently amended) ~~The apparatus according to claim 12 wherein the pigmented reflective member is inclined at an angle with respect to the plane of emission of light from the projector. The apparatus of claim 13, wherein the retention members are substantially parallel to truss members comprising the truss arrangements.~~

17. (Currently amended) ~~The apparatus according to claim 12 wherein the pigmented reflective member comprises a plurality of sections each of which has an independently variable angle of inclination with respect to the axis perpendicular to the plane of emission of light from the projector. The apparatus of claim 7, wherein the screen is inclined at approximately 45° to the plane of emission of light from the projector.~~

18. (Currently amended) ~~The apparatus according to claim 16 wherein the angle of inclination of the member with respect to the plane of emission of light from the projector is~~

variable: The apparatus of claim 7, wherein the light source is located to the rear of the screen, along a top edge of the frame and/or along either side of a stage.

19-50. (canceled)

51. (Currently amended) ~~The apparatus of claim 50, wherein:~~

~~the variable tensioning arrangement can be adjusted so that even tension is applied to the screen; and~~

~~the variable tensioning arrangement includes a plurality of tensioning straps connected to the frame that can be individually tightened and loosened using a plurality of buckle arrangements. An image projection apparatus, comprising:~~

a projector, a frame or fixed mounting points, and an at least partially transparent screen;

the frame or fixed mounting points being arranged to retain the screen under tension, such that the screen is inclined at an angle with respect to a plane of emission of light from the projector;

the screen having a front surface arranged such that light emitted from the projector is reflected therefrom; and

the projector being arranged to project an image such that light forming the image impinges upon the screen such that a virtual image is created from light reflected from the screen, the virtual image appearing to be located behind the screen, and wherein the frame comprises first and second retention members arranged to sandwich an edge region of the screen therebetween, and wherein a plurality of fixing means pass through the first retention member and through the screen and clamp the screen between the first and second retention members, and optionally locking means is provided adapted to lock the fixing means.

52. (Currently amended) ~~The apparatus of claim 50, wherein:~~

~~the variable tensioning arrangement includes a plurality of clamp jaws connected to the plurality of tensioning straps and edges of the screen;~~

~~the plurality of buckle arrangements includes a plurality of friction locking buckle arrangements; and~~

~~each of the plurality of clamp jaws has a face coated with an abrasive. The apparatus according to claim 51, wherein respective locking means are provided for the fixing means.~~

53. (Currently amended) The apparatus of claim 50, wherein:

~~the screen includes a liquid crystal display screen or a television screen; and~~

~~the screen includes individual sections that can be individually raised and lowered. The apparatus according to claim 52, wherein the locking means is provided in the form of nuts, to lock the fixing means in position, the fixing means extending through the retention members and the screen.~~

54. (Currently amended) ~~The apparatus of claim 50, further comprising a computer eonnected to the projection screen and operable to black out a portion of the projection screen to form a mask. The apparatus according to claim 51, wherein the first and second retention members comprise a plurality of respective openings, with the fixing means extending through the openings.~~

55. (New) The apparatus according to Claim 51, wherein an abrasive surface is provided on at least one of the retention members to increase the grip between the retention member and the screen, thereby reducing the likelihood of the screen slipping when held by the retention member.

56. (New) The apparatus according to claim 55, wherein the abrasive surface comprises sandpaper.

57. (New) The apparatus according to claim 51, wherein the screen is a foil.

58. (New) The apparatus according to claim 51, characterized in that the screen is a polymeric transparent foil that is held taught and substantially wrinkle-free by the retention members, the retention members having generally parallel faces which clamp an edge region of the foil between them, and wherein individually variable foil tensioning mechanisms are provided at spaced apart locations around the periphery of the foil to enable the foil to have tensioning force independently varied at the said spaced apart locations around the periphery of the foil, and wherein the first and second retention members are connected to one or more flexible tensioning means, which extend from the frame or fixed mounting points to the foil-gripping members, the foil, flexible tensioning means and the frame or fixed mounting points lying in a common inclined plane, with the tension on the foil being applied in the plane of the flexible tensioning means, and the foil.

59. (New) The apparatus according to claim 58, characterized in that the tensioning mechanisms comprise straps and ratchet strap tensioners, or straps and a friction-locking buckle arrangement.

61. (New) The apparatus according to claim 51, wherein the screen is inclined at approximately 45° to the plane of emission of light from the projector.

62. (New) The apparatus according to claim 51, wherein the screen comprises a partially reflective layer upon the front surface.

63. (New) The apparatus according to claim 51, wherein the screen is attached to the frame at the screen's upper and/or lower edges.

64. (New) The apparatus according to claim 51, wherein the first and second retention members comprise respective openings therethrough arranged to collocate with openings in respective jaws of clamping members attached to tensioning straps.

65. (New) The apparatus according to claim 64, wherein the tensioning straps are attached to a truss arrangement or a fixed mounting point located in a permanent structure such as a wall, floor or ceiling and are adjustable such that the tension of the screen within the truss arrangement can be varied about the periphery of the screen.

66. (New) The apparatus according to claim 65, wherein the retention members are substantially parallel to truss members comprising the truss arrangement.